

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
29 September 2005 (29.09.2005)

PCT

(10) International Publication Number
WO 2005/090843 A1

(51) International Patent Classification⁷: **F16K 31/363** //
B67D 5/28

[NO/NO]; Øverbyvn. 8, N-2819 Gjøvik (NO). HANSEN,
Arild [NO/NO]; Hellandvn. 7A, N-2830 Raufoss (NO).

(21) International Application Number:
PCT/NO2005/000089

(74) Agent: **ABC-PATENT, SIVILING. ROLF CHR. B.
LARSEN A.S.**; Brynsveien 5, N-0602 Oslo (NO).

(22) International Filing Date: 14 March 2005 (14.03.2005)

(81) Designated States (*unless otherwise indicated, for every
kind of national protection available*): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ,
TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA,
ZM, ZW.

(25) Filing Language: Norwegian

(26) Publication Language: English

(30) Priority Data:
20041198 19 March 2004 (19.03.2004) NO

(71) Applicant (*for all designated States except US*): **RA-
GASCO AS** [NO/NO]; Postboks 50, N-2831 Raufoss
(NO).

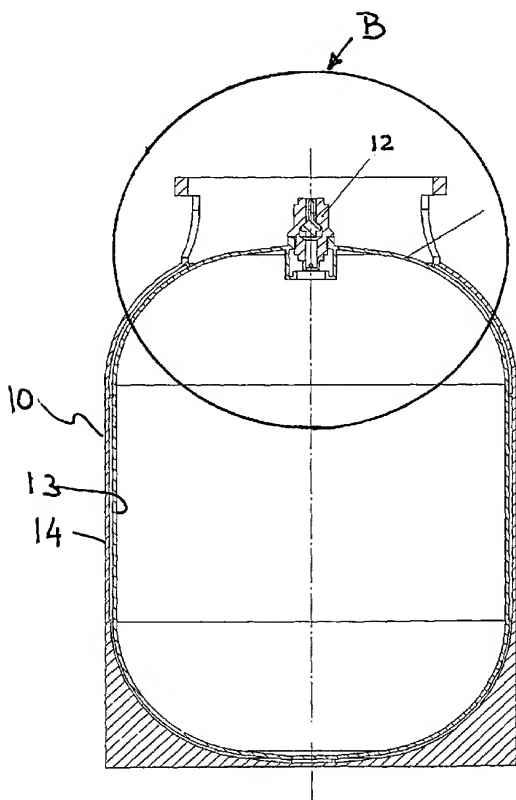
(84) Designated States (*unless otherwise indicated, for every
kind of regional protection available*): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **ULEKLEIV, Rune**

[Continued on next page]

(54) Title: MEANS AND METHOD FOR REDUCING BUILD-UP OF ELECTROSTATIC CHARGES IN A FLUID CONTAINER



(57) Abstract: The invention relates to a means for preventing build-up of electrostatic potential in a fluid container (10) during filling and/or discharging. The fluid container (10) comprises electrical insulating materials and a valve means (18) through which filling and/or discharging occurs. Means for reducing and/or eliminating electrical and/or electrostatic potential build-up during filling or discharging of the container (10) is arranged in conjunction with the container walls. Such means may for example be arranged in conjunction with the valve means (18), reducing and/or changing the flow velocity of the fluid and/or the flow direction of the fluid during the filling operation. The invention relates also to a method of avoiding build-up of electrical and/or electrostatic potential, the method comprising changing the direction of fluid flow at least once at the top end of the container, so that the flow of fluid into the container preferably becomes laminar and/or is depressurized and wherein the fluid flow velocity into the container (10) is reduced.

WO 2005/090843 A1



FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,
SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,
GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

— *with international search report*